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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,051	03/25/2004	Bryan J. Root	14651.01	5775

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EXAMINER

HOLLINGTON, JERMELE M

ART UNIT PAPER NUMBER

2829

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,051

Applicant(s)

ROOT ET AL.

Examiner

Jermele M. Hollington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 8-9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 09/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: connector or signal cable 107 [see page 6, line 26].

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: item no. 303 in Fig. 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because the words --FIG. 3-- is not label on page 3 of the drawing. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The

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figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it is less than the minimum 50 range words stated above. Correction is required. See MPEP § 608.01(b).
6. The disclosure is objected to because of the following informalities: on page 1, line 11, after "December 4, 2000" should include --now Patent No. 6,586,954--.

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Appropriate correction is required.

Claim Objections

7. Applicant is advised that should claim 3 be found allowable, claim 7 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Golden et al (5196789).

Regarding claim 1, Golden et al disclose [see Fig. 3] a probe needle apparatus (probe 14) having a conductive central core (central wire 10) with alternating layers of dielectric and conductive materials, comprising: the conductive central core (10); a first layer of dielectric material (dielectric layer 11) applied to maintain electrical access to the conductive central core (10) while providing continuous isolation of the conductive central core (10) elsewhere; and a conductive driven guard layer (electrical conductive layer 9) applied around the first layer of dielectric material (11) in electrical isolation from the conductive central core (10).

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Regarding claim 2, Golden et al disclose a protective non-conductive layer (insulation layer 8) applied around the conductive driven guard layer (9) to provide electrical and mechanical protection.

10. Claims 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Maddix et al (6014032).

Regarding claim 10, Maddix discloses [see Fig. 16B] a probe needle apparatus having a conductive central core (metal conductive line 20) with alternating layers of dielectric and conductive materials, comprising: the conductive central core (20); a first layer of dielectric material (dielectric layer 94) applied to maintain electrical access to the conductive central core (20) while providing continuous isolation of the conductive central core (20) elsewhere; a conductive driven guard layer (conductive layer 96) applied around the first layer of dielectric material (94) in electrical isolation from the conductive central core (20); a second layer of dielectric material (dielectric layer 30) applied to maintain electrical access to the conductive central core (20) and the first layer of dielectric material (94) while providing continuous isolation of the conductive central core (20) and the conductive driven guard layer (96) elsewhere; and a second guard layer (adhesive layer 32 shown in Fig. 2A) applied around the second layer of dielectric material (30).

Regarding claim 11, Maddix discloses a protective non-conductive layer (substrate 34) applied around the second conductive driven guard layer (32) to provide electrical and mechanical protection.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golden et al (5196789) in view of Maddix et al (6014032).

Regarding claim 3 and 7, Golden et al disclose [see Fig. 3] a probe needle apparatus (probe 14) comprising: the conductive central core (10); a first layer of dielectric material (dielectric layer 11); a conductive driven guard layer (electrical conductive layer 9) and a protective non-conductive layer (insulation layer 8) applied around the conductive driven guard layer (9) to provide electrical and mechanical protection. However, they do not disclose the dielectric material is coated by a physical/chemical vapor deposition as claimed. Maddix et al disclose [see Fig. 2A] a probe needle apparatus comprising the conductive central core (metal conductive line

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20); a conductive driven guard layer (adhesive layer 32) and a protective non-conductive layer (substrate 34); and a first layer of dielectric material (dielectric layer 30) wherein the dielectric material (30) is coated by a physical/chemical vapor deposition [see col. 4, lines 52-54]. Further, Maddix et al teach that the addition of dielectric material being coated by a physical/chemical vapor deposition is advantageous because it helps complete the construction of a probe assembly so that the probe assembly is able to contact and electrically probe a device under test to ascertain their function and determine failure mechanism. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the apparatus of Golden et al by adding a physical/chemical vapor deposition to coat a dielectric material as taught by Maddix et al in order to complete the construction of a probe assembly so that the probe assembly is able to determine the functionality and failure of a device under test such as any semiconductor devices.

Conclusion

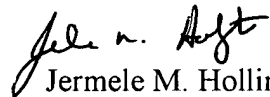
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson (5486770), O'Loughlin (4365109), Maddix et al (6232143), and Leshner et al (6847219) disclose a method and apparatus for constructing a probe-needed assembly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermele M. Hollington whose telephone number is (571) 272-1960. The examiner can normally be reached on M-F (9:00-4:30 EST) First Friday Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (517) 272-2034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jermele M. Hollington
Patent Examiner
Art Unit 2829

JMH
February 18, 2005